Volume 4 Article 32

4-1-1977

Genetic Stocks Available : Recent additions to the Soybean Genetic Type Collection Li st

Soybean Genetics Newsletter

VI. GENETIC STOCKS AVAILABLE

Table 1

Recent additions to the Soybean Genetic Type Collection List[†]

Strain	Genes or description	Source	Maturity	Code
T263	dwarf	Found in Harosoy 63 X PI 257.435 in 1968 in the Iowa State University nursery in Hawaii. A74-2	II	PGNBr DYY
T264	dense pubescence	Found in neutron-irradiated 'Blackhawk' in the N_2 generation at Urbana in 1956. L58-2749	I	WGNBr SYBF
T265H	chlorophyll deficient	Found in Williams[6] X T259 in the F_2 generation in 1974-75 in the greenhouse at Urbana. L75-0324	III	WTNTn SYBl
T266H	$\underline{ms_1}$-Urbana	Found in an F_3 row of L67-533 (Clark-S) X SRF300 at Urbana in 1971. See Soybean Genet. Newsl. 2: 49-51. 1975. [higher female fertility than T260]	IV	TTNBr -YBl
T267H	$\underline{ms_1}$-Tonica	Semi-sterile plant found in a field of Harosoy by F. M. Burgess, Tonica, IL, in 1955. L56-292	II	PGNBr DYY
T268H	$\underline{ms_1}$-Ames, $\underline{St_4}$	Semi-sterile plant found in T258 at Ames, IA, in 1970. A73g-21	II	PGNBr DYY

[†]For additional information see Soybean Genetics Newsletter 3: 62-67. 1976.

Table 2

Genetic linkage groups in soybeans

Linkage group	Linkage intensity map[†]
Linkage Group 1	
dwarf (T263)	y_{12} 20.2(1.1) e_1 3.9(0.4) t
e_1 early maturity	dwarf 15.4(1.0) t
fg_3 flavonol glycoside	fg_3 13.7(6.6) t
fg_4 flavonol glycoside	fg_4 0 t
t gray pubescence	fg_4 12.0(1.8) fg_3
y_{12} chlorophyll deficient	
Linkage Group 2	
p_1 nonglabrous plant	p_1 20.9(2.4) r
r brown seed	
Linkage Group 3	
d_1 green seed embryo	g 4.2(0.6) d_1
g yellow seed coat	
Linkage Group 4	
ln narrow leaf	v_1 35.6(0.9) ln 26.4(1.4) p_2
p_2 puberulent plant	
v_1 variegated leaf	
Linkage Group 5	
dt_1 determinate stem	dt_1 39.4(1.8) l_1
fg_1 flavonol glycoside	dt_1 39.8(3.0) fg_1
l_1 tan or brown pod	
Linkage Group 6	
df_2 dwarf plant	df_2 12.1(0.7) y_{11}
y_{11} chlorophyll deficient	
Linkage Group 7	
i self dark seed coat	y_{13} 31.3(1.9) o 17.8(0.7) i
o red brown seed coat	rhg_4 ? i
rhg_4 susceptible to cyst nematode	
y_{13} chlorophyll deficient	
Linkage Group 8	
ms_1 male sterile	w_1 29.7(1.6) ms_1
w_1 white flower	w_1 2.2(0.5) wm
wm magenta flower	

[†]Linkage intensity map values given as percentage recombination, standard errors enclosed in parentheses: % R (SE).

Table 3

F_2 linkage data for new linkage information in soybeans[†]

Genes		Phenotypic classes								Cross	Reference
a	b	AB	Ab	aB	ab	Sum	% R	SE	Phase	No.[††]	No.[††]
T263 (dwarf)	t	1158	130	112	300	1700	15.4	1.0	C	2	5
dt_1	fg_1	135	33	31	16	215	39.8	3.0	C	1	4
fg_1	dt_1	135	31	33	16	215	39.8	3.0	C	1	4
fg_3	fg_4	247	19	20	71	357	12.0	1.8	C	3	1
fg_3	t	111	48	59	1	219	13.7	6.6	R	4	4
fg_4	fg_3	247	20	19	71	357	12	1.8	C	3	1
fg_4	t	111	47	63	0	221	0	0.0	R	5	1
ms_1	w_1	1268	583	557	60	2468	30.4	1.8	R	6	5
ms_1	w_1	451	87	91	100	729	27.9	2.0	C	7	5
t	T263 (dwarf)	1158	112	130	300	1700	15.4	1.0	C	2	5
t	fg_3	111	59	48	1	219	13.7	6.6	R	4	4
t	fg_4	111	63	47	0	221	0	0.0	R	5	1
w_1	ms_1	1268	557	583	60	2468	30.4	1.8	R	6	5
w_1	ms_1	451	91	87	100	729	27.9	2.0	C	7	5
w_1	wm	333	6	4	107	450	2.2	0.5	C	8	3
w_1	wm	778	379	387	0	1544	0		R	9	2[†††]
wm	w_1	333	4	6	107	450	2.2	0.5	C	8	3
wm	w_1	778	387	379	0	1544	0		R	9	2[†††]

[†]Data for Linkage Groups 1-7 not included; see references for Linkage Groups 1-7.

[††]See Tables 4 and 5 for crosses and references, respectively.

[†††]See also Buzzell, R. I., R. L. Bernard and B. R. Buttery. 1974. Soybean Genet. Newsl. 1: 14-15.

Table 4

Cross No.	Crosses	Reference
1	OX250 (fg_1 dt_1) X OX922 (Fg_1 Dt_1)	4
2	T263 (dwarf t) X disomics and trisomics A and B (tall T)	5
3	T31 (Fg_3 Fg_4) X OX936 (fg_3 fg_4)	1
4	Blackhawk (Fg_3 t) X Kingwa (fg_3 T)	4
5	AK-FC 30.761 (fg_4 T_1) X Beeson (Fg_4 t_1)	1
6	T266 (ms_1 W_1) X disomics and trisomics A and B (Ms_1 w_1)	5
7	T260 (ms_1 w_1) X disomic and trisomic C (Ms_1 W_1)	5
8	OX281 (w_1 wm) X Beeson (W_1 Wm)	3
9	L62-904 (w_1 Wm) X T235 (W_1 wm)	2

Table 5

Reference	References for new linkage information
1	Buzzell, R. I. 1974. Soybean Genet. Newsl. 1: 11-14.
2	Buzzell, R. I. 1975. Soybean Genet. Newsl. 2: 10-11.
3	Buzzell, R. I. 1976. Soybean Genet. Newsl. 3: 11-14.
4	Buzzell, R. I. 1977. Soybean Genet. Newsl. 4: 12-13.
5	Palmer, R. G. 1977. Soybean Genet. Newsl. 4: 40-42.

Linkage group	References for Linkage Groups 1-7
1	Weiss, M. G. 1970. Crop Sci. 10: 69-72.
2&3	Weiss, M. G. 1970. Crop Sci. 10: 300-303.
4	Weiss, M. G. 1970. Crop Sci. 10: 368-370.
5&6	Weiss, M. G. 1970. Crop Sci. 10: 469-470.
7	Weiss, M. G. 1970. Crop Sci. 10: 627-629.

Data and information Tables 2-5 compiled by David M. Stelly and Reid G. Palmer.